Order of delivery →	10 - 1.1 Systems Architecture	10 - 1.2 Memory	10 - 1.3 Storage	10 - 1.4 Wired and Wireless Networks	10 - 1.5 Network Topologies, Protocols & Layers	10 - 1.6 System Security	10 - 1.7 Systems Software	10 - 1.8 Ethical, Legal, Cultural and Environmental Concerns
Key Questions	1.1 What is the purpose of the CPU? What are registers? What affects the performance of a computer? What is an embedded system?	1.2 What is ROM? What is RAM? Why do we need ROM and RAM? What is virtual memory? What is flash memory?	1.3 What is the difference between primary and secondary storage? What are the common types of storage?	1.4 What is a LAN? What is a WAN? What affects the performance of a network? |What is a client server/peer2peer network? What hardware is needed to form a network? What is the Internet? Whatis a virtual network? What is a DNS?	1.5 What is a topology? What is encryption? What is ethernet? What is IP addressing? What is MAC addressing? What is a protocol?	1.6 What threats are there for a network? How can we prevent threats to a network?	1.7 What is systems software? What does it do? What is an operating system? What is utility software? What is backing up?	1.8 What ethical, legal, cultural, environmental and privacy issues issues relate to compter science? What is a stakeholder? What is propritary software? What is open source software? What are the main acts of parliament which relate to th euse of computers?
Knowledge	1.1 Need to know the function of the CPU. What are the different registers inside the CPU? Cache, RAM, clock speed and No. of cores affects the performance of a computer. Explain what an embedded system looks like.	1.2 To know the difference between ROM and RAM. To know why virtual memory is required. To know what flash memory is.	1.3 The difference between primary and secondary storage. To know the different types of storage.	1.4. To know the difference between a LAN and a WAN? To know the factors which affect the performance of a network. To know the hardware required to form a network. To know the function of a DNS.	1.5 To know about the different topologies. To know why encryption is required. Explain what ethernet is. To know the difference between IP and MAC addressing. To know there are different protocols for different uses.	1.6 To know a range of different threats to a network. To know a range of preventative measures to a network.	1.7 To know the different functions of an operating system. To know a range of utility software packages. To know different ways to backup.	1.8 To know ethical, legal, cultural, environmental and privacy issues which relate to compter science? To know the Data Protection Act, the Computer Misuse Act, the Copyright, Patents and Dsign Act, Creative Commons Licensing, Freedom of Information. Toknow the difference between open source and proprietary software.
Skills	1.1 Be able to explain the purpose of the CPU. Clearly explain the role of each register. Be able to explain what affects the performance of a computer. Clearly explain the difference between an embedded system and a traditionla PC setup.	1.2 Be able to identify a storage device for a given scenario To explain the different types of storage and their advantages and disadvantages. Be able to explain how virtual memory works. To exlain where fl and why flash memory is used.	1.3 Be able to explain the difference between primary and secondary storage. Be able to recommend a secondary storage device for a given scenario.	1.4 Be able to explain the difference between a LAN and a WAN. Be able to explain the factors that affect the performance of a network. Be able to explain what hardware is required to form a network and their purpose. Explain the role of a DNS with regard to accessing a website.	1.5 Be able to explain the advantages and disadvantages of different topologies. Be able to explain how encryption keeps a network/data secure. Be able to explain where ethernet would be used and why. Be able to explain the difference between IP and MAC addressing. Be able to explain what protocol would be used for a given scenario.	1.6 Be able to clearly explain a range of threats to a network. Be able to clearly explain a range of preventative measures for given threats.	1.7 Be able to clearly explain the purpose of an operating system and some of its functions. Be able to clearly explain what utility software would be used for a given scenario. To clearly explain what backup method would be used for a given scenario.	1.8 To be able to explain the difference between open source and proprietary software. To be able to clearly explain ethical, legal, cultural, environmental and privacy issues issues relate to compter science for a given scenario. To be bale to clearly explain the various forms of legislation for a fiven scenario.
Vocab	1.1 architecture, registers, accumulator, cache, embedded	1.2 virtual memory, flash memory	1.3 robust, portability, durability, secondary storage, optical, magentic, solid state	1.4. cloud, LAN, WAN, DNS, virtual networks	1.5 Topology, frequency, encryption, MAC addressing, protocols, layers, packet switching, TCP/IP, HTTP, HTTPS, FTP, POP, IMAP, SMTP	1.6 threat, preventative measure	1.7 user interface, defragmentation, data compression, backup	1.8 ethical, legal, cultural, environmental
Assessment	End of Unit 1 assessment. Exam type assessment.	End of Unit 1 assessment. Exam type assessment.	End of Unit 1 assessment. Exam type assessment.	End of Unit 2 assessment. Exam type assessment.	End of Unit 2 assessment. Exam type assessment.	End of Unit 3 assessment. Exam type assessment.	End of Unit 3 assessment. Exam type assessment.	End of Unit 4 assessment. Exam type assessment.